

## **CLAIM AMENDMENTS**

1. (previously amended) An on-chip multiple tap transformer balun comprises:

first winding operably coupled for a single-ended signal;  
and

a plurality of windings operably coupled for at least one of a first differential signal and a second differential signal, wherein a first of the plurality of windings is symmetrical with a fourth winding of the plurality of winding, and a second winding of the plurality of windings is symmetrical with a third winding of the plurality of windings.

2. (previously amended) The on-chip multiple tap transformer balun of claim 1, wherein the plurality of windings comprises a substantially octagon interwound shape with a plurality of taps for coupling to the first and second differential signals.

3. (currently amended) The on-chip multiple tap transformer balun of claim 1 further comprises:

a shunt winding on a different layer, wherein the shunt winding is coupled in parallel with the first winding.

4. (previously amended) The on-chip multiple tap transformer balun of claim 1, wherein the plurality of windings further comprises:

fifth and sixths windings operably coupled for a third differential signal, wherein the fifth winding is symmetrical with the sixth winding.

5. (previously amended) The on-chip multiple tap transformer balun of claim 1 further comprises:

a plurality of shunt windings on a different layer, wherein the plurality of shunt windings is connected in parallel to with the plurality of windings.

6. (previously amended) The on-chip multiple tap transformer balun of claim 1 comprises:

the first winding being on a first layer of an integrated circuit;

the plurality of windings being on a second layer of the integrated circuit, wherein the second layer is a metalization layer of the integrated circuit having lowest resistivity.

7. (original) The on-chip multiple tap transformer balun of claim 1, wherein the first winding further comprises multiple turns.

8. (cancelled)

9. (previously amended) The on-chip multiple tap transformer balun of claim 1, wherein the plurality of windings further comprises:

a rectangular octagonal shape having a first dimension lengthened with respect to a square octagonal reference shape and having a second dimension shortened with respect to the square octagonal reference shape, wherein area of the rectangular octagonal shape is similar to area of the square octagonal reference shape.

10. (original) The on-chip multiple tap transformer balun of claim 1 further comprises:

an integrated circuit size based on a balancing of inductance values of the on-chip multiple tap transformer balun, turns ratio of the on-chip multiple tap transformer balun, quality factor of the on-chip multiple tap transformer balun, and capacitance of the on-chip multiple tap transformer balun.

## RESPONSE

In the above referenced office action, the Examiner issued an election/restriction for five embodiments based on the figures. In particular, embodiment 1 of figures 3-5, embodiment 2 of figure 6, embodiment 3 of figure 7, embodiment 4 of figure 8, and embodiment 5 of figure 9.

The applicant requests reconsideration of the restriction requirement and, based on the following, makes a preliminary election of claims 1-7, 9 and 10. Given the figure based species groupings made by the Examiner, the applicant cannot make any other preliminary election.

The applicant states the following in support of the request for reconsideration:

35 USC § 121 - Divisional Applications, states, in part:

If two or more independent and distinct inventions are claimed in one application, the Director may require the application to be restricted to one of the inventions. [emphasis added]

37 CFR 1.141(a) - Different inventions in one national application.

(a) Two or more independent and distinct inventions may not be claimed in one national application, except that more than one species of an invention, not to exceed a reasonable number, may be specifically claimed in different claims in one national application, provided the application also includes an allowable claim generic to all the claimed species and all the claims to species in excess of one are written in dependent form (§ 1.75) or otherwise

include all the limitations of the generic claim.  
[emphasis added]

MPEP

#### 802.01 Meaning of "Independent" and "Distinct"

35 U.S.C. 121 quoted in the preceding section states that the Commissioner may require restriction if two or more "independent and distinct" inventions are claimed in one application. In 37 CFR 1.141, the statement is made that two or more "independent and distinct inventions" may not be claimed in one application.

This raises the question of the subjects as between which the Commissioner may require restriction. This, in turn, depends on the construction of the expression "independent and distinct" inventions.

"Independent", of course, means not dependent. If "distinct" means the same thing, then its use in the statute and in the rule is redundant. If "distinct" means something different, then the question arises as to what the difference in meaning between these two words may be. The hearings before the committees of Congress considering the codification of the patent laws indicate that 35 U.S.C. 121: "enacts as law existing practice with respect to division, at the same time introducing a number of changes."

The report on the hearings does not mention as a change that is introduced, the subjects between which the Commissioner may properly require division.

The term "independent" as already pointed out, means not dependent. A large number of subjects between which, prior to the 1952 Act, division had been proper, are dependent subjects, such as, for example, combination and a subcombination thereof; as process and apparatus used in the practice of the process; as composition and the process in which the composition is used; as process and the product made by such process, etc. If section 121 of the 1952 Act were intended to direct the Commissioner never to approve division between dependent inventions, the word "independent" would clearly have been used alone. If the Commissioner has authority or discretion to restrict independent inventions only, then restriction would be improper as between dependent inventions, e.g., the examples used for purpose of illustration above. Such was clearly not the intent of Congress. Nothing in the language of the statute and nothing in the hearings of the

committees indicate any intent to change the substantive law on this subject. On the contrary, joinder of the term "distinct" with the term "independent", indicates lack of such intent. The law has long been established that dependent inventions (frequently termed related inventions) such as used for illustration above may be properly divided if they are, in fact, "distinct" inventions, even though dependent.

#### INDEPENDENT

The term "independent" (i.e., not dependent) means that there is no disclosed relationship between the two or more subjects disclosed, that is, they are unconnected in design, operation, or effect, for example: (1) species under a genus which species are not usable together as disclosed; or (2) process and apparatus incapable of being used in practicing the process.

#### DISTINCT

The term "distinct" means that two or more subjects as disclosed are related, for example, as combination and part (subcombination) thereof, process and apparatus for its practice, process and product made, etc., but are capable of separate manufacture, use, or sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER (though they may each be unpatentable because of the prior art). It will be noted that in this definition the term related is used as an alternative for dependent in referring to subjects other than independent subjects.

It is further noted that the terms "independent" and "distinct" are used in decisions with varying meanings. All decisions should be read carefully to determine the meaning intended.

#### 803 Restriction - When Proper

Under the statute an application may properly be required to be restricted to one of two or more claimed inventions only if they are able to support separate patents and they are either independent

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

## CRITERIA FOR RESTRICTION BETWEEN PATENTABLY DISTINCT INVENTIONS

There are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) The inventions must be independent (see MPEP § 802.01, § 806.04, § 808.01) or distinct as claimed (see MPEP § 806.05 -§ 806.05(i)); and

(B) There must be a serious burden on the examiner if restriction is required (see MPEP § 803.02, § 806.04(a) -§ 806.04(i), § 808.01(a), and § 808.02).

## GUIDELINES

Examiners must provide reasons and/or examples to support conclusions, but need not cite documents to support the restriction requirement in most cases.

Where plural inventions are capable of being viewed as related in two ways, both applicable criteria for distinctness must be demonstrated to support a restriction requirement.

If there is an express admission that the claimed inventions are obvious over each other within the meaning of 35 U.S.C. 103, restriction should not be required. *In re Lee*, 199 USPQ 108 (Comm'r Pat. 1978).

For purposes of the initial requirement, a serious burden on the examiner may be *prima facie* shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search as defined in MPEP § 808.02. That *prima facie* showing may be rebutted by appropriate showings or evidence by the applicant. Insofar as the criteria for restriction practice relating to Markush-type claims is concerned, the criteria is set forth in MPEP § 803.02. Insofar as the criteria for restriction or election practice relating to claims to genus-species, see MPEP § 806.04(a) -§ 806.04(i) and § 808.01(a).

## 806 Determination of Distinctness or Independence of Claimed Inventions

The general principles relating to distinctness or independence may be summarized as follows:

(A) Where inventions are independent (i.e., no disclosed relation therebetween), restriction to one thereof is ordinarily proper, MPEP § 806.04 -§ 806.04(i), though a reasonable number of species may be claimed when there is an allowed (novel and unobvious) claim generic thereto. 37 CFR 1.141, MPEP § 809.02 -§ 809.02(e).

(B) Where inventions are related as disclosed but are distinct as claimed, restriction may be proper.

(C) Where inventions are related as disclosed but are not distinct as claimed, restriction is never proper.

Where restriction is required by the Office double patenting cannot be held, and thus, it is imperative the requirement should never be made where related inventions as claimed are not distinct. For (B) and (C) see MPEP § 806.05 -§ 806.05(i) and § 809.03. See MPEP § 802.01 for criteria for patentably distinct inventions.

#### 806.04(d) Definition of a Generic Claim

In an application presenting three species illustrated, for example, in Figures 1, 2, and 3, respectively, a generic claim should read on each of these views; but the fact that a claim does so read is not conclusive that it is generic. It may define only an element or subcombination common to the several species.

It is not possible to define a generic claim with that precision existing in the case of a geometrical term. In general, a generic claim should include no material element additional to those recited in the species claims, and must comprehend within its confines the organization covered in each of the species.

For the purpose of obtaining claims to more than one species in the same case, the generic claim cannot include limitations not present in each of the added species claims. Otherwise stated, the claims to the species which can be included in a case in addition to a single species must contain all the limitations of the generic claim.

Once a claim that is determined to be generic is allowed, all of the claims drawn to species in addition to the elected species which include all the limitations of the generic claim will ordinarily be obviously allowable in view of the allowance of the generic claim, since the additional species will depend thereon or otherwise include all of the limitations thereof. When all or some of the claims directed to one of the species in addition to the



elected species do not include all the limitations of the generic claim, then that species cannot be claimed in the same case with the other species. See MPEP § 809.02(c).

#### 806.04(e) Claims Restricted to Species

Claims are definitions of inventions. *Claims are never species.* Claims may be restricted to a single disclosed embodiment (i.e., a single species, and thus be designated a *specific species claim*), or a claim may include two or more of the disclosed embodiments within the breadth and scope of definition (and thus be designated a *generic or genus claim*).

*Species are always the specifically different embodiments.*

Species are usually but not always independent as disclosed (see MPEP § 806.04(b)) since there is usually no disclosure of relationship therebetween. The fact that a genus for two different embodiments is capable of being conceived and defined, does not affect the independence of the embodiments, where the case under consideration contains no disclosure of any commonality of operation, function or effect.

#### 806.04(f) Claims Restricted to Species, by Mutually Exclusive Characteristics

Claims to be restricted to different species must be mutually exclusive. The general test as to when claims are restricted, respectively, to different species is the fact that one claim recites limitations which under the disclosure are found in a first species but not in a second, while a second claim recites limitations disclosed only for the second species and not the first. This is frequently expressed by saying that claims to be restricted to different species must recite the mutually exclusive characteristics of such species.

#### 806.04(h) Species Must Be Patentably Distinct From Each Other

Where an applicant files a divisional application claiming a species previously claimed but nonelected in the parent case, pursuant to and consonant with a requirement to restrict, there should be no

determination of whether or not the species claimed in the divisional application is patentable over the species retained in the parent case since such a determination was made before the requirement to restrict was made.

In a national application containing claims directed to more than a reasonable number of species, the examiner should not require restriction to a reasonable number of species unless he or she is satisfied that he or she would be prepared to allow claims to each of the claimed species over the parent case, if presented in a divisional application filed according to the requirement. Restriction should not be required if the species claimed are considered clearly unpatentable over each other.

In making a requirement for restriction in an application claiming plural species, the examiner should group together species considered clearly unpatentable over each other, with the statement that restriction as between those species is not required.

Where generic claims are allowed in a national application, applicant may claim in the *same application* additional species as provided by 37 CFR 1.141.

Where, however, an applicant optionally files another national application with claims to a different species, or for a species disclosed but not claimed in a parent case as filed and first acted upon by the examiner, there should be close investigation to determine the presence or absence of patentable difference. See MPEP § 804.01 and § 804.02.

In view of the foregoing citations, for a species restriction to be proper, it must show that the inventions are independent or distinct as claimed AND there must be a serious burden on the examiner if restriction is required.

(MPEP 803) A claim is independent if it is not dependent (MPEP 802.01). Claims are distinct if they include two or more subjects as disclosed are related, but are capable of separate manufacture, use, or sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER. (MPEP

802.01) Further, 35 USC § 121 indicates that, if a

restriction is to be required, it is based on two or more independent and distinct inventions that are claimed and not on embodiments shown in the figures.

In the present patent application, the claims include one independent claim and 8 dependent claims therefrom. In light of the definition of independent (i.e., not dependent), the dependent claims of claim 1, cannot be deemed independent since, by definition, they are dependent claims of claim 1. Further, the present claims are not distinct, since the dependent claims further characterize aspects of the independent claim. Finally, there would not be a serious burden on the Examiner to exam one independent claims and eight dependent claims therefrom.

The Examiner is invited to contact the undersigned by telephone or facsimile if the Examiner believes that such a communication would advance the prosecution of the present invention.

RESPECTFULLY SUBMITTED,

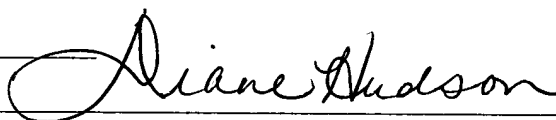
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37 C.F.R 1.8

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